UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 June 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3-7,9-13,15-20 and 22-28</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,3-7,9-13,15-20 and 22-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All   b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

ReOpen Prosecution

1.   Examiner believes that the previously cited prior art fully teaches the disputed claims. However, in the interest of presenting clearer grounds of rejection and full demonstrating that the present claims are taught by the previously cited prior art references, the prosecution on the merits is reopened.

Response to Arguments

2.   Applicant's arguments filed 25 June 2008 have been fully considered but they are not persuasive.
Regarding page 1 to page 3, line 21:

Applicant argues that Examiner confuses information *about* the watermark with information that is *in* the watermark; and that the additional information is not the location information.

Examiner replies that claim 1 specifically recites, among other things, a "storage unit that stores the detected pieces of additional information in association with location information thereof." The claim does *not* recite or otherwise require that the location information and the additional information are wholly separate from one another. Claim 1 simply requires that the location information exist and that the detected pieces of additional information is stored in association with the location information. The language of claim 1 does allow for the location information to be a part of the additional information, since there is nothing in the language of claim 1 that explicitly states or implicitly requires otherwise. While certain aspect of Applicant's specification may include such a requirement, and Applicant may have intended to require in claim 1 that the additional information and the location information are separate from each other, there is no such recitation in claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that the watermark detector taught by Evans (US-6,577,746 B1) discerns the placement of the imported image within the original image, not the location of the watermark itself.

Examiner replies that while the watermark detector discerns the placement of the imported image within the original image, the watermark location is directly related to the location of the imported image. Further, Examiner is considering the detected image, along with the watermark and watermark ID embedded in the detected image, to be the additional information. The recited "additional information" simply that. The language of the claim does not require that "additional information" be specifically a watermark. While Applicant is correct to an extent in the analysis of the references, the cited

combination of references still teaches the specifically recited claim language. Thus, new grounds of
rejection based on Applicant's arguments are set forth in the modified rejections below.

Regarding page 3, line 22 to page 4, line 7:

Applicant argues that there is no updating of the watermark in Evans.

Examiner replies that the pristine picture in Evans that is used to substitute the original picture
detected in the document can contain a watermark, and the watermark can contain a different payload
(column 3, lines 29-33 of Evans). Thus, by substituting the original picture with a new pristine picture,
both the picture *and* the watermark are updated.

Conclusion: The previously cited prior art is still seen to render the present claims obvious.
However, in light of Applicant's arguments presented in the Pre-Appeal Brief, the basis of the
obviousness rejections is modified below.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness
rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the art to which said subject
> matter pertains. Patentability shall not be negatived by the manner in which the invention was
> made.

4.   **Claims 1, 3, 5-7, 9, 11-13, 15, 17-20, 22 and 24-28 are rejected under 35 U.S.C. 103(a) as
being unpatentable over Evans (US Patent 6,577,746 B1) in view of Ikenoue (US Patent 5,987,127).**

Regarding claims 1, 7, 13, 19, 20, 26, 27 and 28: Evans discloses an image forming apparatus
(figure 1 of Evans) equipped with an image processing apparatus (figure 1 of Evans) that processes
inputted first image data so as to output second image data, the image forming apparatus forming an
image according to the second image data (column 3, lines 13-28 of Evans – *document image [first image
data] input, and detected picture replaced with pristine picture to form updated document image [second
image data] that is output*), the image processing apparatus comprising: a detecting unit (figure 1(18) of
Evans) that detects all pieces of additional information (*detected picture, watermark and watermark ID
data*) that are embedded in the first image data (column 2, lines 7-14 of Evans); a storage unit (figure 1

(16) of Evans – *or other inherently present computer memory needed to store information for processing (see column 4, lines 20-24 of Evans)*) that stores the detected pieces of additional information in association with location information thereof (column 2, lines 25-35 and lines 61-65 of Evans – *location of detected picture, which is part of additional information, determined and used to update with pristine version of detected picture; watermark and watermark ID embedded in detected picture [column 2, lines 7-10 of Evans]*); an analyzing unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding analyzing functions*) that analyzes the detected pieces of additional information and judges whether any of the detected pieces of additional information includes predetermined information that is updatable (column 3, lines 29-39 and lines 47-51 of Evans – *if a picture, which includes a watermark, is detected in the document, and there is a newer version of the picture with watermark at the server, the watermarked image is updated*); and an embedding unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding embedding functions*) that (1) updates, when a judgment result of the analyzing unit is affirmative, the predetermined information included in the piece of additional information (column 3, lines 29-39 and lines 47-51 of Evans – *if a picture, which includes a watermark, is detected in the document, and there is a newer version of the picture with watermark at the server, the watermarked image is updated*), and embeds the piece of additional information including the updated predetermined information into the first image data at a location where the piece of additional information is originally embedded, by referring to the stored location information (figure 1(30,30'); column 2, lines 61-65; and column 3, lines 14-26 of Evans), wherein the first image data embedded with the predetermined information and/or the new piece of additional information is outputted as the second image data (column 3, lines 23-28 of Evans).

Evans does not disclose expressly that said embedding unit (2) embeds, when a judgment result of the analyzing unit is negative, a new piece of additional information including updated information into the first image data at a location that does not overlap locations where the detected pieces of additional information are embedded, by referring to the stored location information, the updated information being equivalent to the predetermined information.

Ikenoue discloses embedding a new piece of additional information including updated information into the first image data at a location that does not overlap locations where the detected pieces of additional information are embedded (figure 2(1st Generation) and column 6, lines 33-47 of Ikenoue – *new information added where there is no information for each new generation copy code when each generation of a copy is made; must be in new location since older generation codes already exist at*

their respective locations, or there is no copy code if copy is first generation). Since both the updated information taught by Ikenoue and the predetermined information taught by Evans are watermarks containing particular information, the updated information taught by Ikenoue is equivalent to the predetermined information taught by Evans.

Evans and Ikenoue are combinable because they are from the same field of endeavor, namely the detection and updating of watermark data in document copying. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add any necessary predetermined information at locations where is not presently any additional information, as taught by Ikenoue. The motivation for doing so would have been to be able to manage the number of copies generated and prevent illegal copying, through the use of updated generational watermark data (column 2, lines 23-32 of Ikenoue). The predetermined information in Ikenoue is not updatable and Evans cites some conditions in which updating information at the location of the watermark would be undesirable (column 2, lines 48-53; and column 3, lines 29-30 and lines 52-57 of Evans). Therefore, it would have been obvious to combine Ikenoue with Evans to obtain the invention as specified in claims 1, 7, 13, 19, 20, 26, 27 and 28.

Further regarding claim 1: The apparatus of claim 1 is fully embodied in the apparatus of claim 7.

Further regarding claim 13: The apparatus of claim 7 performs the method recited in claim 13.

Further regarding claim 19: The apparatus of claim 7 performs the method recited in claim 19.

Further regarding claim 20: The apparatus of claim 7 executes the steps of the computer program recited in claim 20.

Further regarding claim 26: The apparatus of claim 26 is fully embodied in the apparatus of claim 1.

Further regarding claim 27: The method of claim 27 is fully embodied in the method of claim 13.

Further regarding claim 28: The computer-readable medium containing a program of claim 28 is embodied in the computer-readable medium containing a program of claim 20.

Regarding claims 3, 9, 15 and 22: Evans discloses that when the analyzing unit analyzes the detected pieces of additional information, the analyzing unit employs a predetermined embedding format used by the embedding unit (column 2, lines 36-39 and lines 47-53 of Evans – *watermark and watermark ID in set format embedded in image of particular format*).

Further regarding claims 5, 11, 17 and 24: Ikenoue discloses that, when the analyzing unit finds that any of the detected pieces of additional information is unanalyzable (column 13, lines 60-66 of

Ikenoue), the analyzing unit judges that the piece of additional information does not include the predetermined information (column 14, lines 4-8 of Ikenoue). Blocks of additional data are analyzed to determine whether or not said blocks of additional data are invalid (column 13, lines 60-66 of Ikenoue). If said block of additional data are invalid, but said invalidity is not due to forgery, said invalid blocks are deleted (column 14, lines 4-8 of Ikenoue). Thus, said invalid blocks clearly do not have said predetermined information.

Further regarding claims 6, 12, 18 and 25: Ikenoue discloses that the predetermined information includes information about a date when the image data is processed (column 16, lines 21-22 and lines 33-34 of Ikenoue).

5.   **Claims 4, 10, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US Patent 6,577,746 B1) in view of Ikenoue (US Patent 5,987,127) and Davis (US Patent 3,760,159).**

Further regarding claims 4, 10, 16 and 23: Ikenoue discloses a warning unit (figure 13(20) of Ikenoue) that issues, when the additional data is determined to be secret (column 19, lines 60-65 of Ikenoue) and the proper confirmation data is not entered (column 20, lines 3-4 of Ikenoue), a warning to the effect that the copying of the document would be illegal (column 20, lines 5-9 of Ikenoue).

Ikenoue further discloses using the analyzing unit to find if any of the detected pieces of additional information are unanalyzable (column 13, lines 60-66 of Ikenoue).

Evans in view of Ikenoue does not disclose expressly that said warning unit issues, when the analyzing unit finds that any of the detected pieces of additional data is unanalyzable, a warning to the effect that the piece of additional information is unanalyzable.

Davis discloses issuing a warning to the effect that a valid parity does not exist (column 6, lines 16-20 of Davis) in the digital input data (column 5, lines 64-68 of Davis).

Evans in view of Ikenoue is combinable with Davis because they are from similar problem solving areas, namely the verification of digital information. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to display a warning if the digital data cannot be read properly, as taught by Davis, and is therefore unanalyzable, as taught by Ikenoue. The motivation for doing so would have been to give the operator a visual notification that an error has occurred (column 6, lines 19-20 of Davis). Therefore, it would have been obvious to combine Davis with Evans in view of Ikenoue to obtain the invention as specified in claims 4, 10, 16 and 23.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is (571)272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Thompson/
Examiner, Art Unit 2625

15 September 2008